



Zoom Meeting Interface and Basic Logistics



*image above is a publicly available tutorial image obtained from Zoom website

- **All Attendees** will be muted during this presentation.
- **ONLY panelists** will have their mics and cameras enabled.
- **CHAT:** The chat function is open to **ALL** participants (bottom, middle right, highlighted in orange in this image). Attendees are encouraged to provide feedback and questions via chat during the presentation.
- **BREAKOUTS:** Attendees will be pushed into their respective breakout rooms following the opening plenary. Please stay logged in during the break to enable this process. If you log out and log back in you will be put back into the main session and will have to wait for the host to put you back in your assigned breakout room.
- **TECHNICAL DIFFICULTIES:** Having trouble hearing the presenters or seeing the shared screen? Put your issue in chat and the Meeting Host will help you.

A decorative background of various icons in a network pattern. The icons include: a bar chart with an upward arrow, a star in a circle with a ribbon, a padlock, a stack of papers, an '@' symbol, a clipboard with a person icon, a magnifying glass over a document, a circular refresh arrow, and three interlocking gears. The icons are connected by a dotted line that forms a circular path.

Stakeholder Nuances

Morning Breakout Room #4
ONC *FAST* Workshop
September 14, 2020



Presenters



STEPHEN KONYA
Senior Advisor to the Deputy
National Coordinator for Health IT
HHS/ONC

ONC Lead, FHIR at Scale Taskforce
(FAST)



Lenel James
BCBSA

FAST Coordinating
Committee Member



Agenda

- **Welcome**
- **FAST Mission**
- **Stakeholders Nuances**
 - **Uniquely identifying a Patient's Payer**, *Linda Michaelsen, Director Healthcare Interoperability Standards, Optum*
 - **Integrating Patients into the Nation's Digital Health Ecosystem**, *Mark Savage, Director Health Policy, UCSF's Center for Digital Health Innovation*
 - **The Gravity Project: Consensus-driven Standards on Social Determinants of Health**, *Evelyn Gallego, EMI Advisors LLC, Gravity Program Manager*
 - **New York State Data Exchange**, *Dheeraj Pal, NYeC, Sr. Technical Lead/Architect*
 - **Some Public Health Considerations for FAST**, *John Loonsk MD FACMI, Johns Hopkins Bloomberg School of Public Health, Consulting CMIO / eCR Lead APHL*



FAST Mission





FAST Proposed Solutions

■ Directory, Version & Scale (3) ■ Identity (4) ■ Exchange Process (1) ■ Testing & Certification (1) ■ Security (4)

⚙️ **A US Wide Solution for FHIR Endpoint Discovery (Version 2)**

⚙️ **A US Wide Methodology for Supporting Multiple Production Versions of FHIR (Version 2)**

⚙️ **US Wide Scaling Requirements for FHIR RESTful Exchange Intermediaries (Version 2)**

⚙️ **Standards Based Approaches for Individual Identity Management (Version 2)**

- Mediated Patient Matching
- Collaborative Patient Matching
- Networked Identity Management
- Distributed Identity Management



⚙️ **An HL7 FHIR Standard Based Solution for Intermediary-to-Intermediary Exchange and Reliable Routing with Metadata (Version 3 Draft)**

- Reliable Routing with Metadata Across Intermediaries

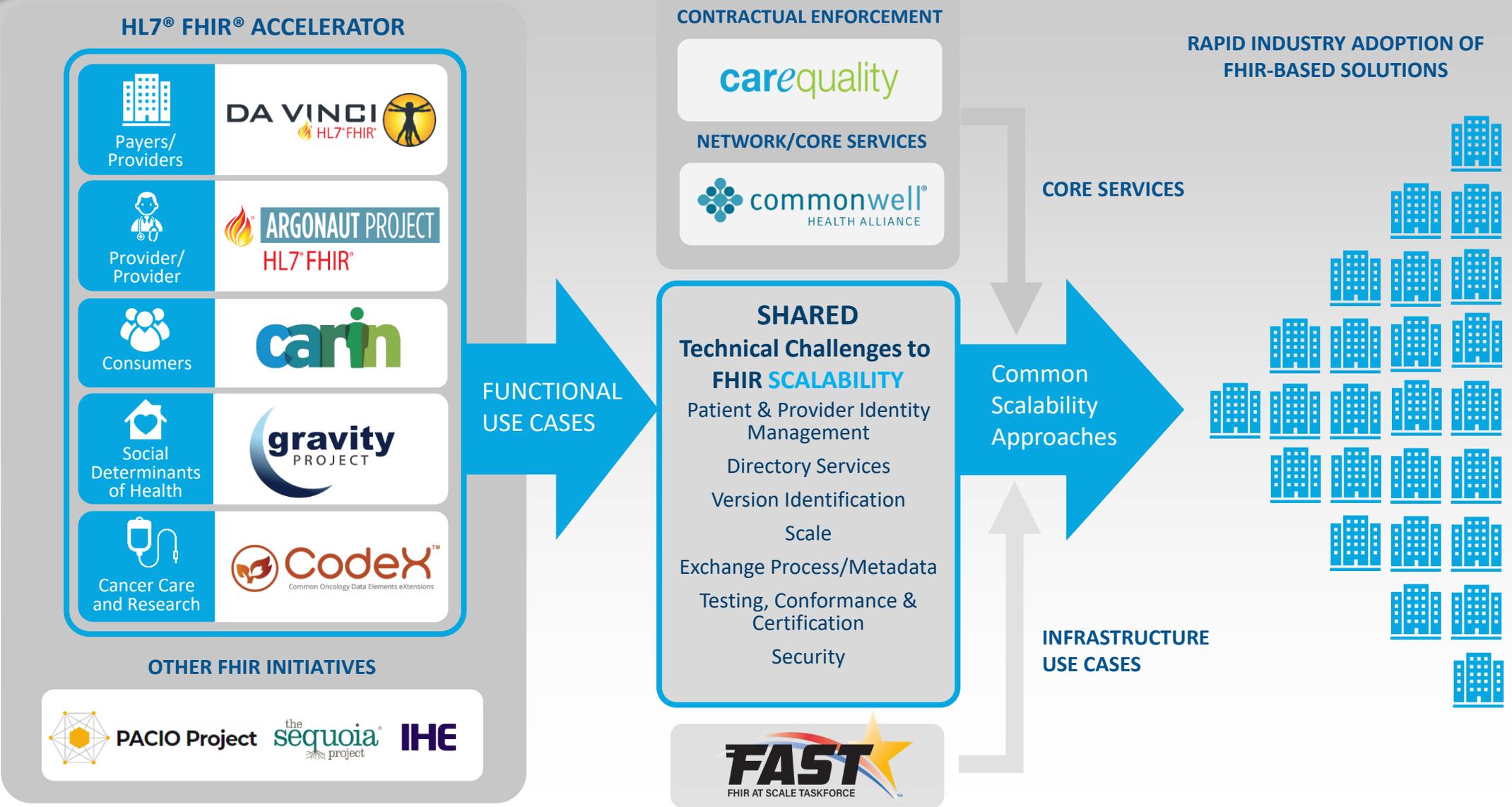
⚙️ **A Scalable FHIR Testing & Certification Platform (Version 2)**

⚙️ **US Wide Model(s) for Scalable Security Solutions (Version 3 Draft)**

- UDAP Trusted Dynamic Client Registration
- UDAP Tiered OAuth for User Authentication
- UDAP JWT-Based Client Authentication
- UDAP JWT-Based Authorization Assertions



Paving the Way Towards FHIR "At Scale"



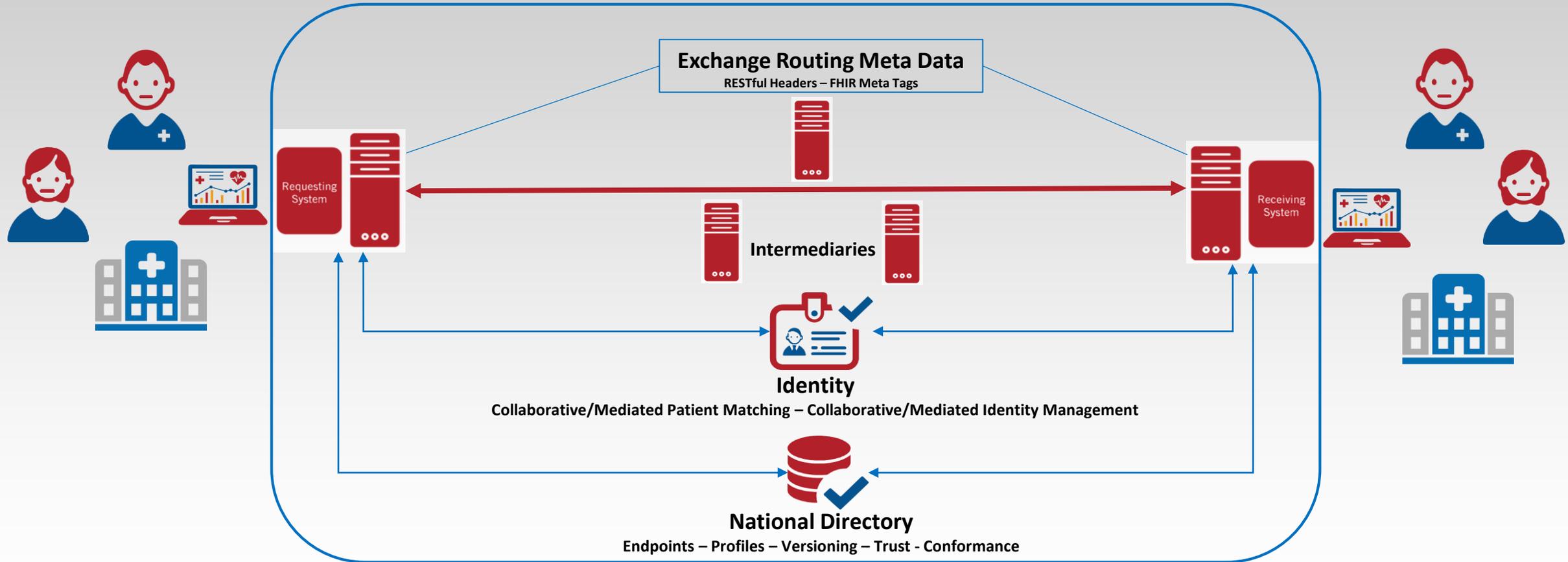


Conceptual Integrated Architecture



Security (Authenticate/Authorize)

UDAP Trusted Dynamic Client Registration - UDAP Tiered OAuth User Authentication - UDAP JWT-Based Client Authentication - UDAP JWT-Based Authorization Assertions

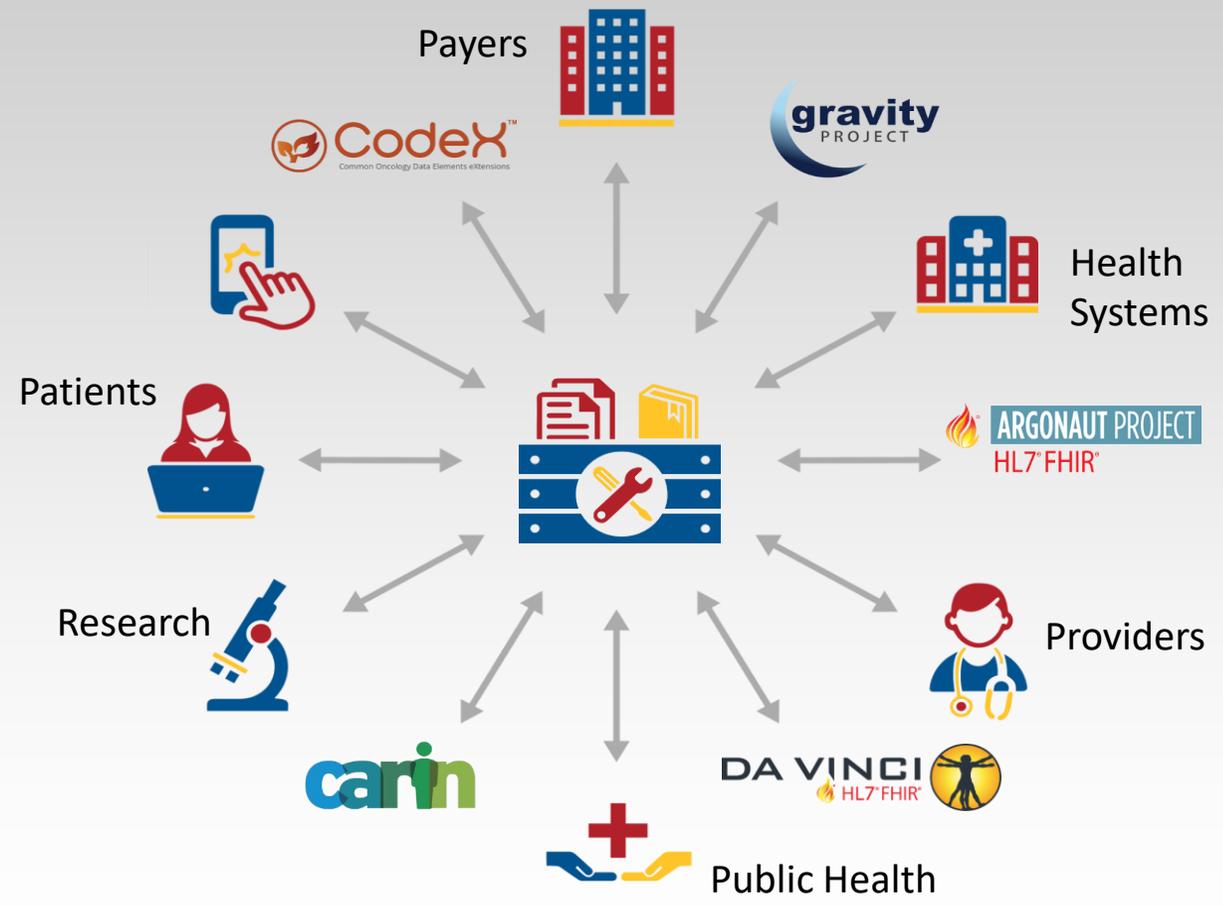
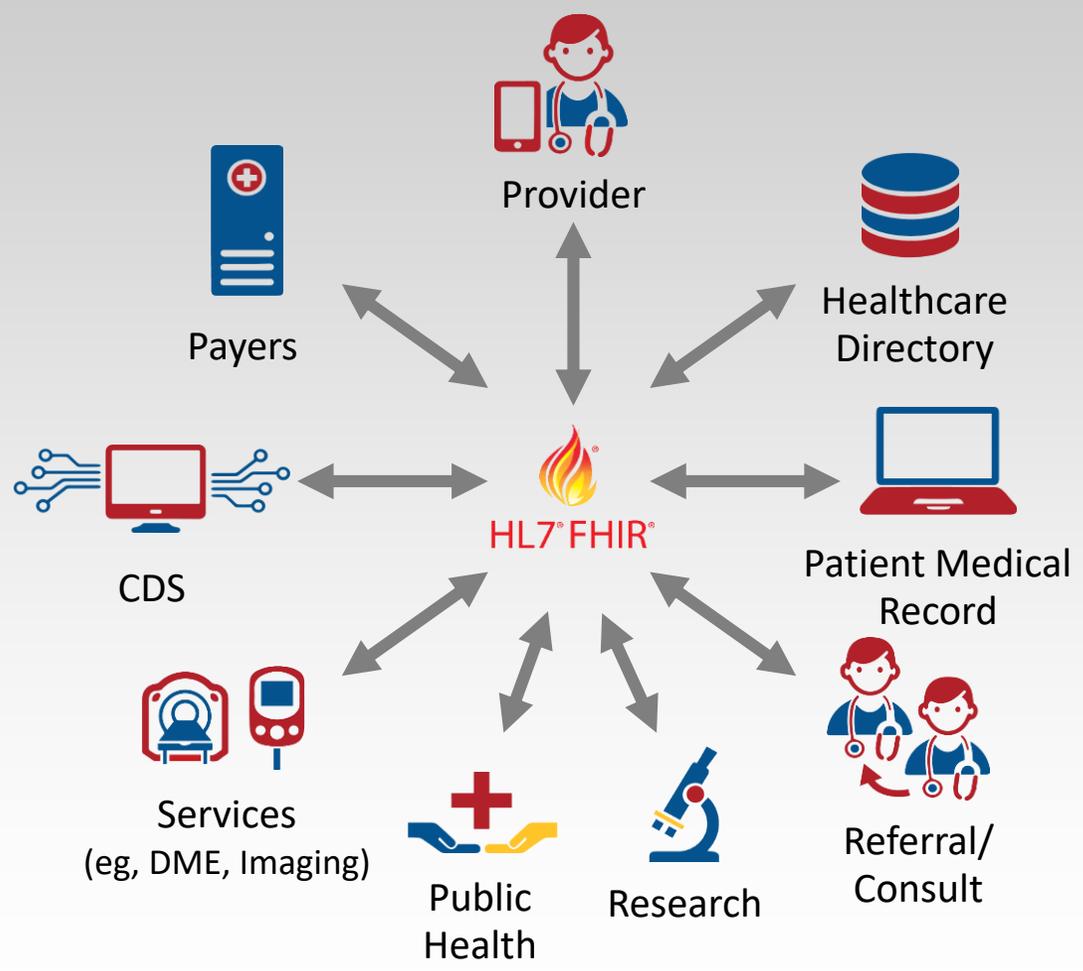


CONFORMANCE & CERTIFICATION (Testing & Certification Program)

PILOTS (FAST Capability Vetting with Existing HL7 Accelerators)



FHIR and the Health Care Ecosystem



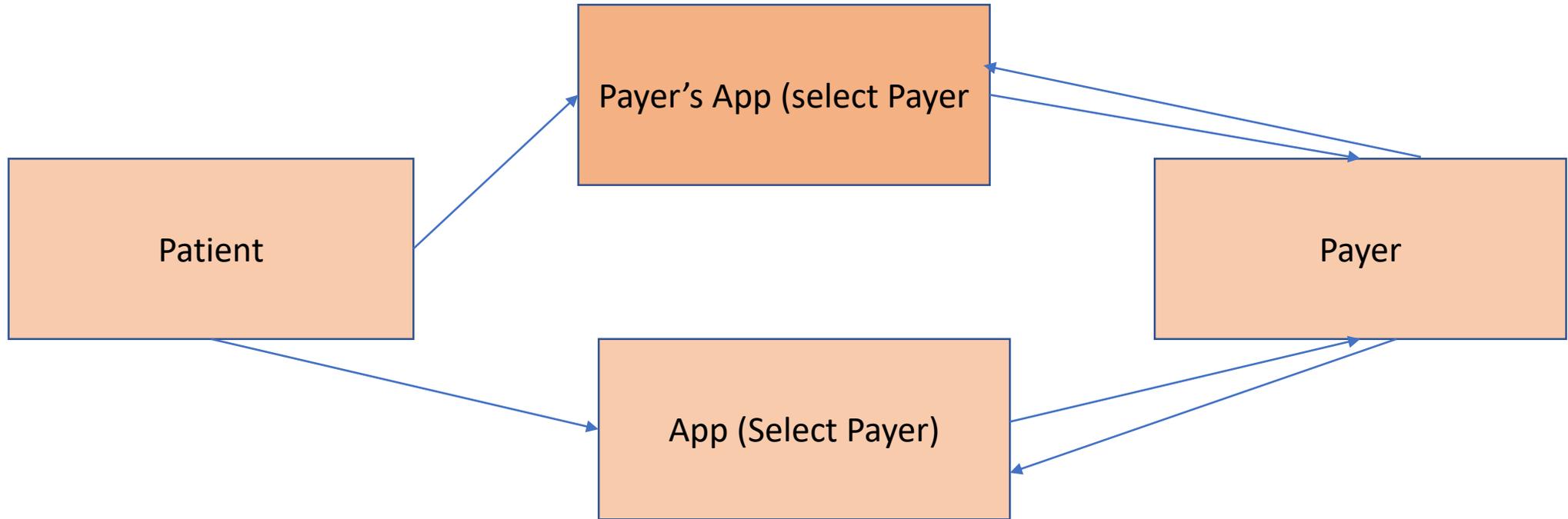
Uniquely identifying a Patient's Payer

Linda Michaelsen, Optum



Uniquely identifying a Patient's Payer

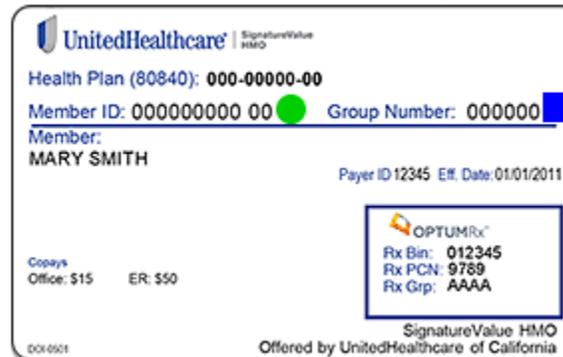
Getting Payer Data



With Patient Directed Access, how does a Patient find their Payer?

- Will each app have to show a list, maybe with address?
- Is there something easier on their card?

Member ID



- Maybe in their portal?
- Will the administrative clearinghouses paradigm work?



Integrating **Patients** into the Nation's Digital Health Ecosystem



Mark Savage, UCSF's Center for
Digital Health Innovation

A background collage of diverse people's faces, overlaid with a grid pattern. The colors transition from teal on the left to yellow on the right. The text is overlaid on this collage.

Integrating **Patients** into the Nation's Digital Health Ecosystem

Mark Savage
Director, Health Policy
UCSF's Center for Digital Health Innovation

Architectural Framework for Ecosystem Infrastructure
FHIR at Scale Taskforce (FAST)
September 14, 2020

ONC's FAST Ecosystem Use Case Tiger Team

- ONC's FHIR at Scale Taskforce (FAST)
 - Open community for payers and providers to solve issues with deploying FHIR and APIs at scale
 - Executive Steering Committee and seven tiger teams
- Ecosystem Use Case Tiger Team
 - Create use cases that direct other tiger teams' efforts and drive their solutions
- Shared Care Planning Use Case
 - Share and use dynamic, longitudinal shared care plans among providers, patients, payors, public health, community and social services, etc.

Shared Care Planning Use Case: Background

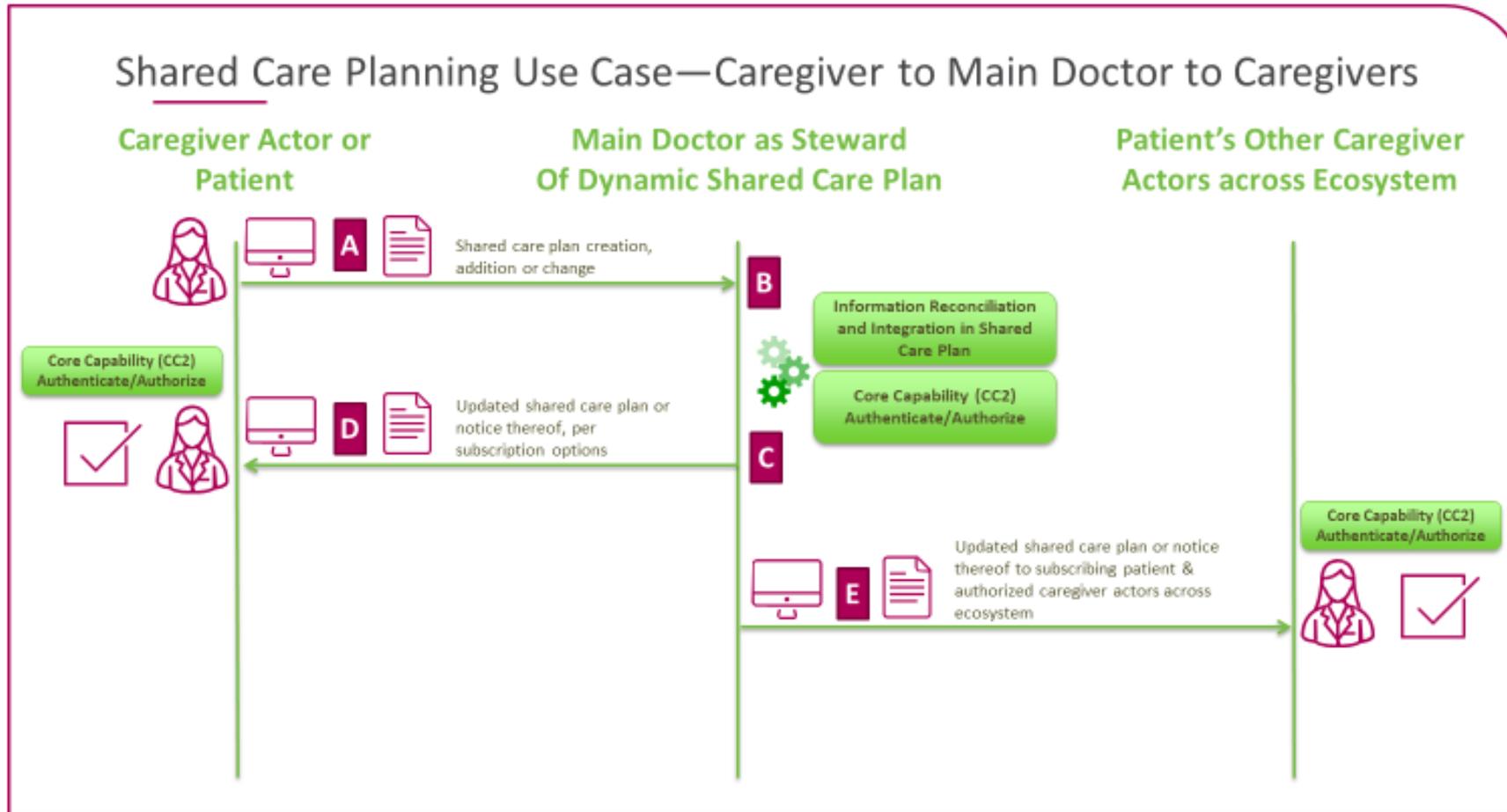
- A dynamic, longitudinal “care plan” is distinct from an episodic “plan of care” or “plan of treatment”
- Integrated care plan provides overview of the individual’s health and care and assists the various care teams in integrating parts and assessing outcomes and value
- Integrated care is core goal across the ecosystem because it should yield better care, better health, better value.
- The ecosystem use case should work across the diversity of patients, care providers, and payers

Shared Care Planning Use Case



- The Shared Care Planning use case focuses on enabling all relevant, authorized parties involved in the shared care of a patient:
- (1) to participate in shared care planning for the patient or individual;
 - (2) to access and use the patient's dynamic, longitudinal shared care plan;
 - (3) to contribute changes to that shared care plan (e.g. updates, corrections, additions) specific to the parties' respective roles in diagnosis, treatment, and care;
 - (4) to integrate and reconcile those changes (e.g. new, episodic plans of treatment), and to identify for users any potential conflicts or adverse interactions (e.g. medication interactions, scheduling conflicts); and
 - (5) to share the updated shared care plan automatically with all relevant, authorized parties.

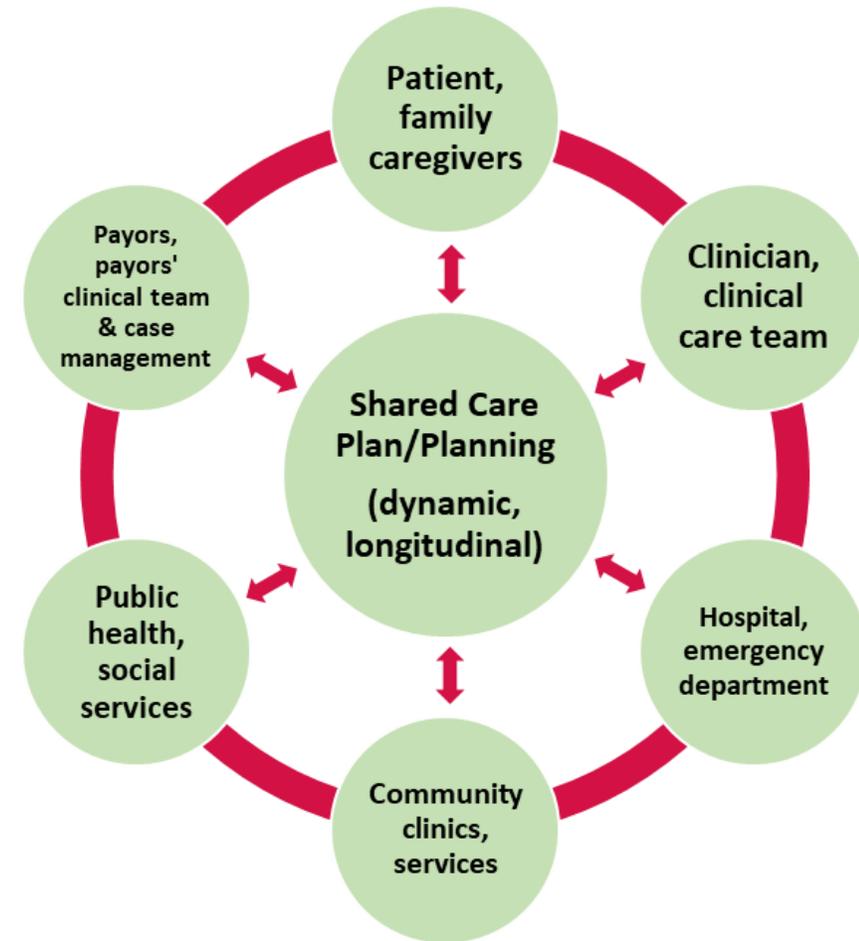
Shared Care Planning Use Case: Flow Chart



Shared Care Planning Use Case: Integrating Stakeholders

FHIR at Scale Taskforce use case, connecting

- Patient, family caregivers
- Clinician, care team
- Hospital, ED
- Community services
- Social services
- Public health, school clinics
- Pharmacy, labs
- Skilled nursing, physical therapy



Explicitly Designing for Patient-Centered Care

- End Point Location: Added **patient** to common situations to look up FHIR end points for organization, physician or patient. Examples:
 - **Diabetes:** Patients may have one manufacturer's pump and another manufacturer's glucose monitor, and build their own middleware. Based on how data are shared from devices, cloud services, etc., there may be a path where the patient is a source and consumer end point.
 - **Durable medical equipment:** Providers might order durable medical equipment (DME) (e.g., CPAP machine for sleep apnea). Consumers might add additional details, such as what type of mask works, etc. Consumers' data then flow to the DME supplier. Consumers' preferences might be stored in personal health records or similar consumer-owned places) and accessed using FHIR during order entry and transmittal.
- All Ecosystem Use Cases

UCSF:
Integrating Delivery
Systems & Reforms

UCSF Health

Academic
Medical Center

**canopy
HEALTH**

9-County
Accountable
Care
Organization

County Hospital
& Trauma
Center



**ZUCKERBERG
SAN FRANCISCO GENERAL**
Hospital and Trauma Center

UCSF

Children's
Hospital System

SF Veterans
Administration
Health System



UCSF Benioff Children's Hospitals



Contact us:

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The Gravity Project: Consensus-driven Standards on Social Determinants of Health

Evelyn Gallego, EMI Advisors LLC

The Gravity Project: Consensus-driven Standards on Social Determinants of Health



ONC FAST Workshop

Sept. 14, 2020

Presented By: Evelyn Gallego, EMI Advisors LLC,
Gravity Program Manager



Agenda

- Background: Business Drivers for SDOH data standards
- Gravity Project Goal and Scope
- Gravity Workstreams & Roadmap
- Public Collaboration
- SDOH Standards
- FHIR SDOH IG Use Cases
- Nuances for Consumer Engagement
- Accomplishments & Success Factors
- Scaling to FAST Solutions

Business Drivers

There is broad consensus that SDOH information improves whole person care and lowers cost. Unmet social needs negatively impact health outcomes.

- **Food insecurity** correlates to higher levels of diabetes, hypertension, and heart failure.
- **Housing instability** factors into lower treatment adherence.
- **Transportation barriers** result in missed appointments, delayed care, and lower medication compliance

One of the biggest barriers to addressing social risk and social needs in clinical settings is the limited standards available to represent the data. We need standards to promote the:

- Collection and use of the data;
- Facilitate the sharing of the data across clinical and non-clinical organizations; and
- Facilitate payment for social risk data collection and intervention activities

Key Learning: Despite increased interest around identifying and addressing SDOH in context of US health care settings, existing medical coding vocabularies and health information exchange standards are poorly equipped to capture related activities.

Enter the Gravity Project...

Goal

Develop consensus-driven data standards to support use and exchange of social determinants of health (SDOH) data within the health care sectors and between the health care sector and other sectors.



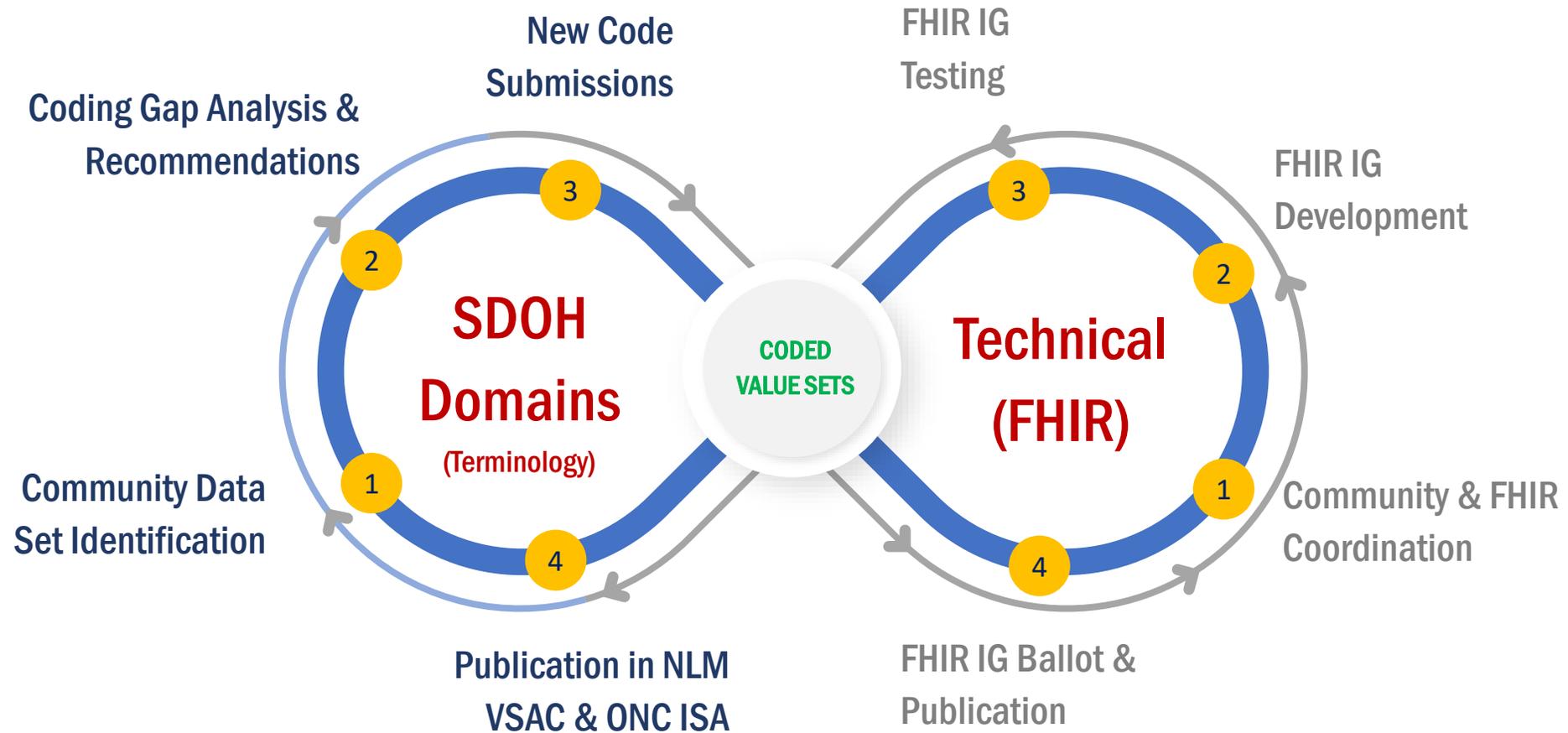
Project Scope

Call to Action: In May 2019, the [Gravity Project](#) was launched as a multi-stakeholder public collaborative with the goal to develop, test, and validate standardized SDOH data for use in patient care, care coordination between health and human services sectors, population health management, public health, value-based payment, and clinical research.

The Gravity Project was initiated by the Social Interventions Research and Evaluation Network (SIREN) with funding from the Robert Wood Johnson Foundation and in partnership with EMI Advisors LLC.

Gravity Project Scope: Develop data standards to represent patient level SDOH data documented across four clinical activities: screening, assessment/diagnosis, goal setting, and treatment/interventions.

Gravity Overview: Two Streams

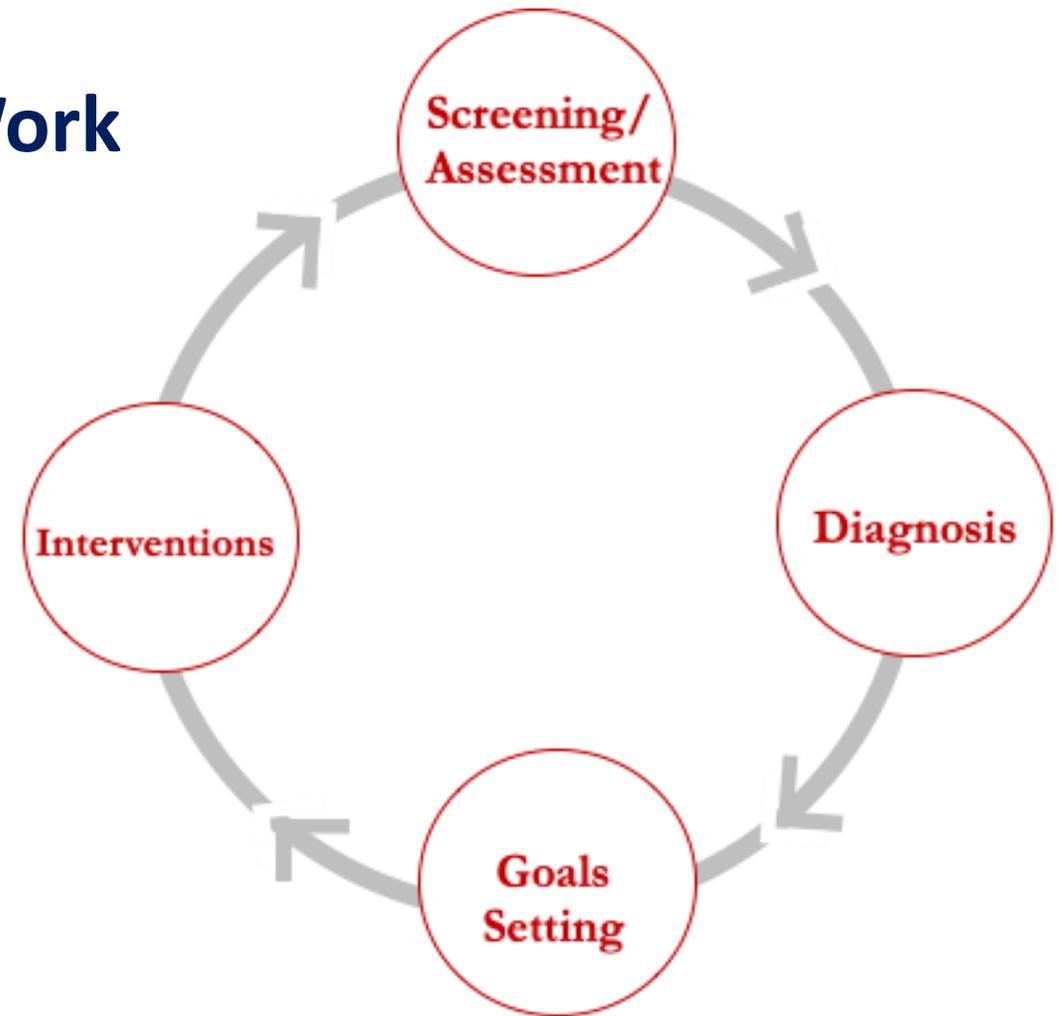


Terminology Workstream

Data Element and Gaps Analysis Work

For each domain:

- What concepts need to be documented across the following activities?
- What codes reflecting these concepts are currently available? What codes are missing?



SDOH Terminology Domains

Phase 1 (2019 to 2020)

- Food Insecurity
- Housing and Homelessness
- Inadequate Housing
- Transportation
- Financial Strain
- Demographic Data (education, employment, veteran status)

Phase 2 (2021)

- Social Isolation
- Stress
- Environmental Safety
- Violence

Technical Workstream

HL7® FHIR® Accelerator Program

- Designed to assist implementers across the health care spectrum in the creation of FHIR Implementation Guides or other informative documents
- Gravity Project became an official Accelerator in August 2019:

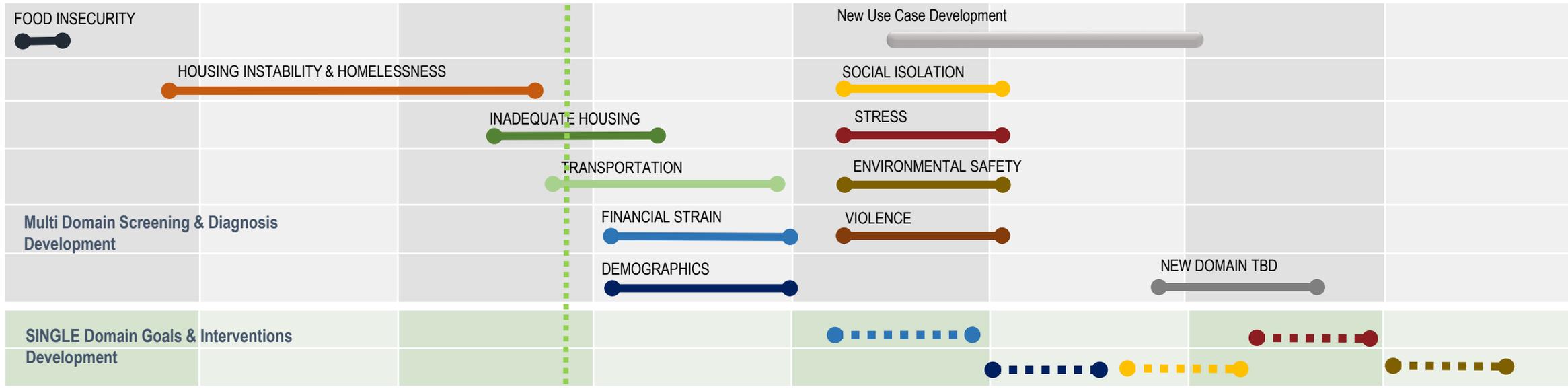
http://www.hl7.org/documentcenter/public_temp_3840821C-1C23-BA17-0C64E3ACBE05D630/pressreleases/HL7_PRESS_20190820.pdf



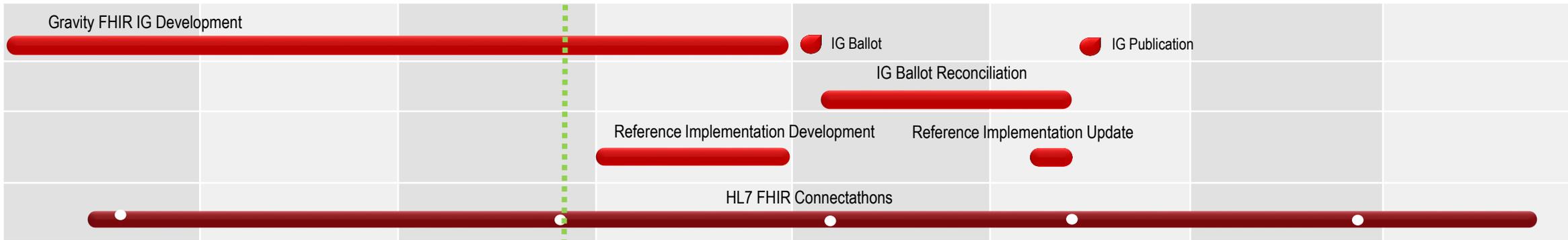
Gravity Roadmap

2020												2021											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

TERMINOLOGY



TECHNICAL



PILOTS



★ WE ARE HERE

Public Collaboration

Gravity has convened over **1,100+** participants from across the health and human services ecosystem from clinical provider groups, community-based organizations, standards development organizations, federal and state government, payers, and technology vendors.

<https://confluence.hl7.org/pages/viewpage.action?pageId=46892669#JointheGravityProject-GravityProjectMembershipList>

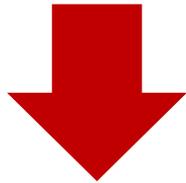


Accelerating Adoption Using Nationally Recognized Standards

LOINC[®]

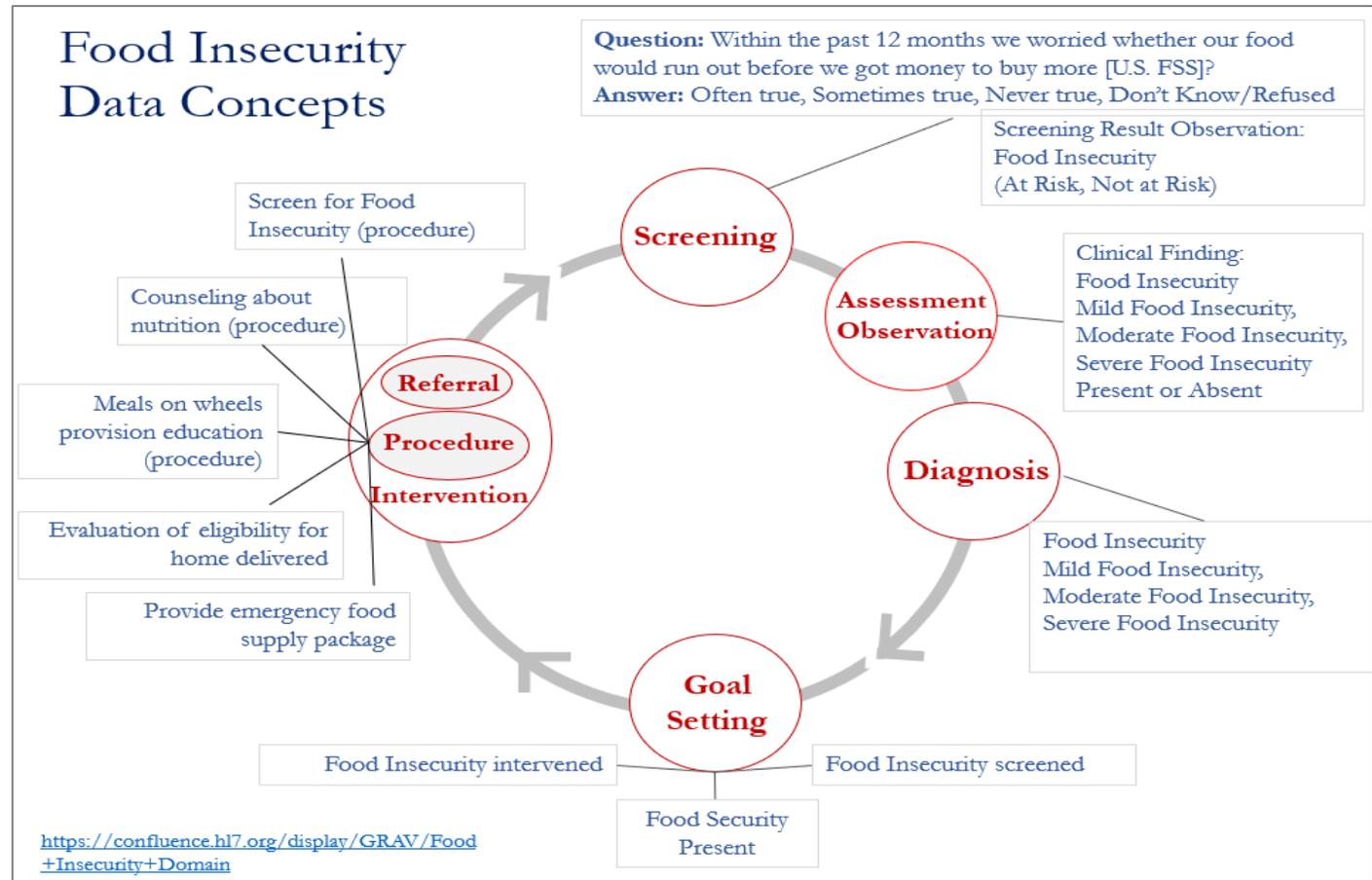
TENTH REVISION
ICD-10
INTERNATIONAL CLASSIFICATION OF DISEASES

SNOMED CT



HL7 FHIR[®]

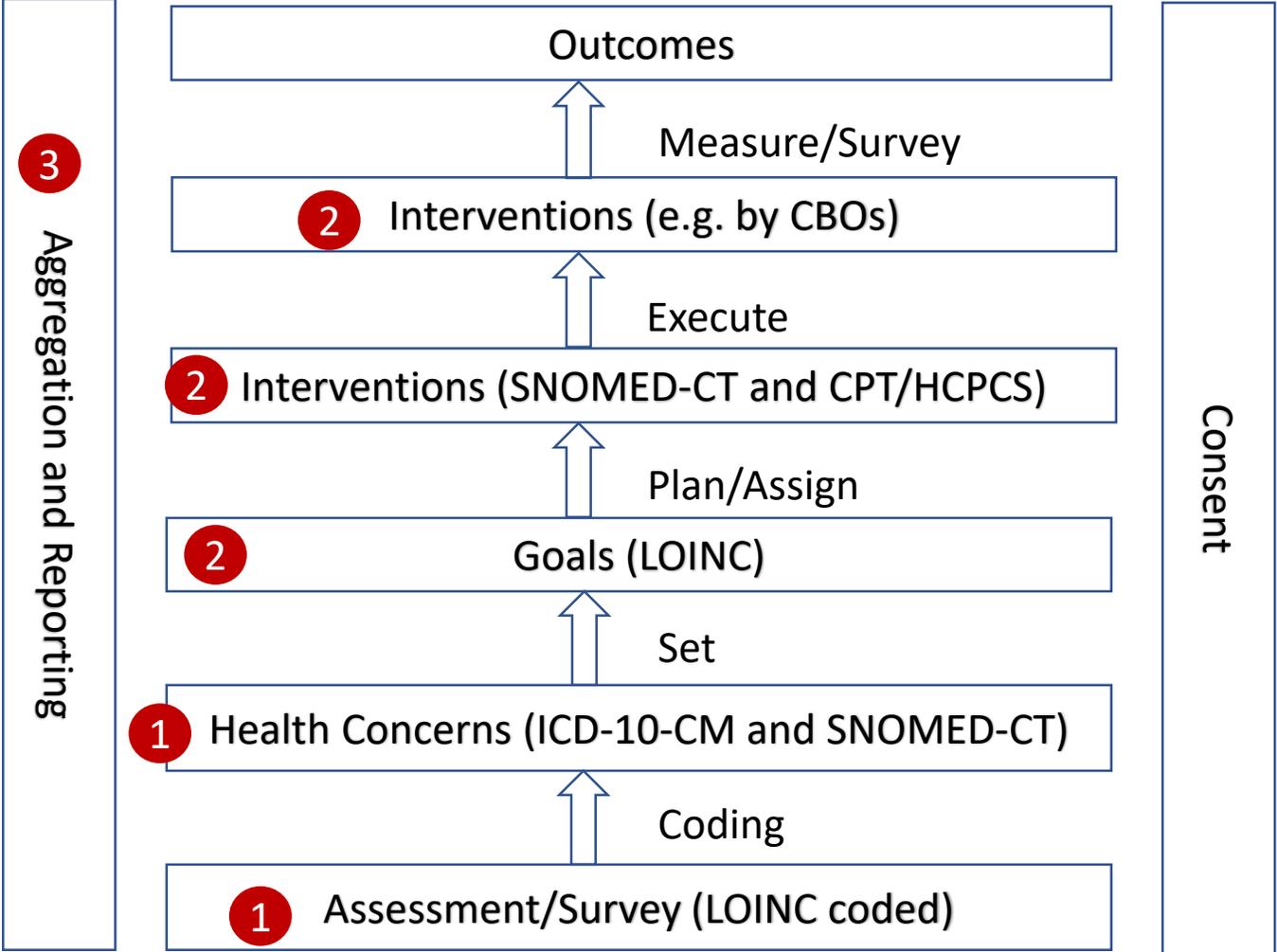
Fast Health Interoperability Resource



Gravity FHIR SDOH Clinical Care IG “use cases” / concepts

- 1 Document SDOH data in conjunction with the patient encounter
- 2 Document and track SDOH related interventions to completion.
- 3 Gather and aggregate SDOH data or uses beyond the point of care (e.g. population health management, quality reporting, and risk adjustment/ risk stratification).

<https://confluence.hl7.org/display/GRAV/Gravity+Use+Case+Package>



Nuances for Consumer Engagement

- Integration of patient/consumer generated data with clinical systems
 - How to incorporate data collected in wearables?
 - How to incorporate data collected in non-clinical systems such as those used for education, housing, employment, and justice?
- Workflow for incorporating consumer collected data into clinical record
- Administration of social risk surveys—who is best to administer and collect the data? How do we train the workforce to ask the questions and act on the data?
- Dissemination of data—how can we rapidly use aggregated data to educate consumers and develop the right interventions to address their social needs by region, state, or population?

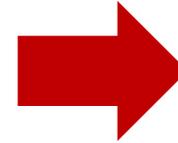
Gravity Project Data Use Principles for Equitable Health and Social Care

- Improving Personal Health Outcomes
- Improving Population Health Equity
- Ensuring Personal Control
- Designing Appropriate Solutions
- Ensuring Accountability
- Preventing, Reducing, and Remediating Harm

<https://confluence.hl7.org/display/GRAV/Gravity+Data+Principles>

Accomplishments & Success Factors

- **June 2019:** Published comprehensive [use case package](#)
- **July 2019:** Launched food insecurity domain.
- **November 2019:** Published the final [food insecurity data set](#) and received national recognition in Department of Health & Human Services (HHS) Roundtable on [“Leveraging Data on the SDOH”](#) Report
- **January 2020:** Completed food insecurity coding gap analysis recommendations.
- **March 2020:** Launched [housing instability](#) domain.
- **May - June 2020:** Submitted [new code applications](#) for food insecurity
- **May 2020:** Tested draft [HL7 FHIR SDOH Implementation Guide \(IG\)](#) at two FHIR Connectathons; achieved 1st place status in competition.
- **Sept 2020:** Tested HL7 FHIR SDOH IG at FHIR Connectathon; launch Transportation Domain; complete Housing Domain
- **Oct 2020:** Launch financial strain and demographics domains in parallel
- **November 2020:** Target food insecurity value set publications in NLM Value Set Authority Center (VSAC) and ONC Interoperability Standards Advisory.
- **December 2020:** ballot-ready [FHIR SDOH Implementation Guide](#).



- **POLICY:** (e.g. ONC USCDI, CMS Promoting Interoperability, State Medicaid Director Letters)
- **PAYMENT MODELS:** (e.g. CMMI SDOH Model)
- **PROGRAMS:** (e.g. Medicare Advantage, Medicaid Managed Care, Hospital QRRP, MIPS).
- **GRANTS:** (e.g. ACL Challenge Grant, ONC Health IT LEAP, RWJF SDOH Integration in Clinical Care).
- **PRACTICE:** (e.g. repeatable process for adoption, implementation, and use of SDOH data at practice level.
- **INNOVATION:** New tools for capture, aggregation, analytics, and use.

Scaling to FAST Solutions

1. Incorporate social risk and social need data collection and exchange across all clinical activities:

- Screening and Patient Assessments e.g. SDOH self administered surveys
- Observations and Diagnoses
 - Patient Reported Outcomes (PROs)
- Goals and Person-Centered Care Planning
 - Incorporate patient/person identified goals
- Treatment and Interventions:
 - Referrals
 - Evaluation/Assessment
 - Evaluation of Eligibility
 - Assistance
 - Counseling
 - Education
 - Provision
 - Coordination

Food Insecurity Codes Available!

- LOINC V2.68 released 6/17/20 (Question/Answer Pairs)
- SNOMED CT (Diagnoses & Interventions)
- ICD-10 (Diagnoses)

<https://confluence.hl7.org/pages/viewpage.action?pageId=55938680#FoodInsecurityDomain-CodingSubmissions>

2. Engage patient facing apps in piloting the Gravity SDOH FHIR IG in 2021

- Balloted SDOH FHIR IG will be available for real world testing in the field

Questions?

Evelyn Gallego evelyn.gallego@emiadvisors.net

Twitter: @egallego

LinkedIn: [linkedin.com/in/egallego/](https://www.linkedin.com/in/egallego/)

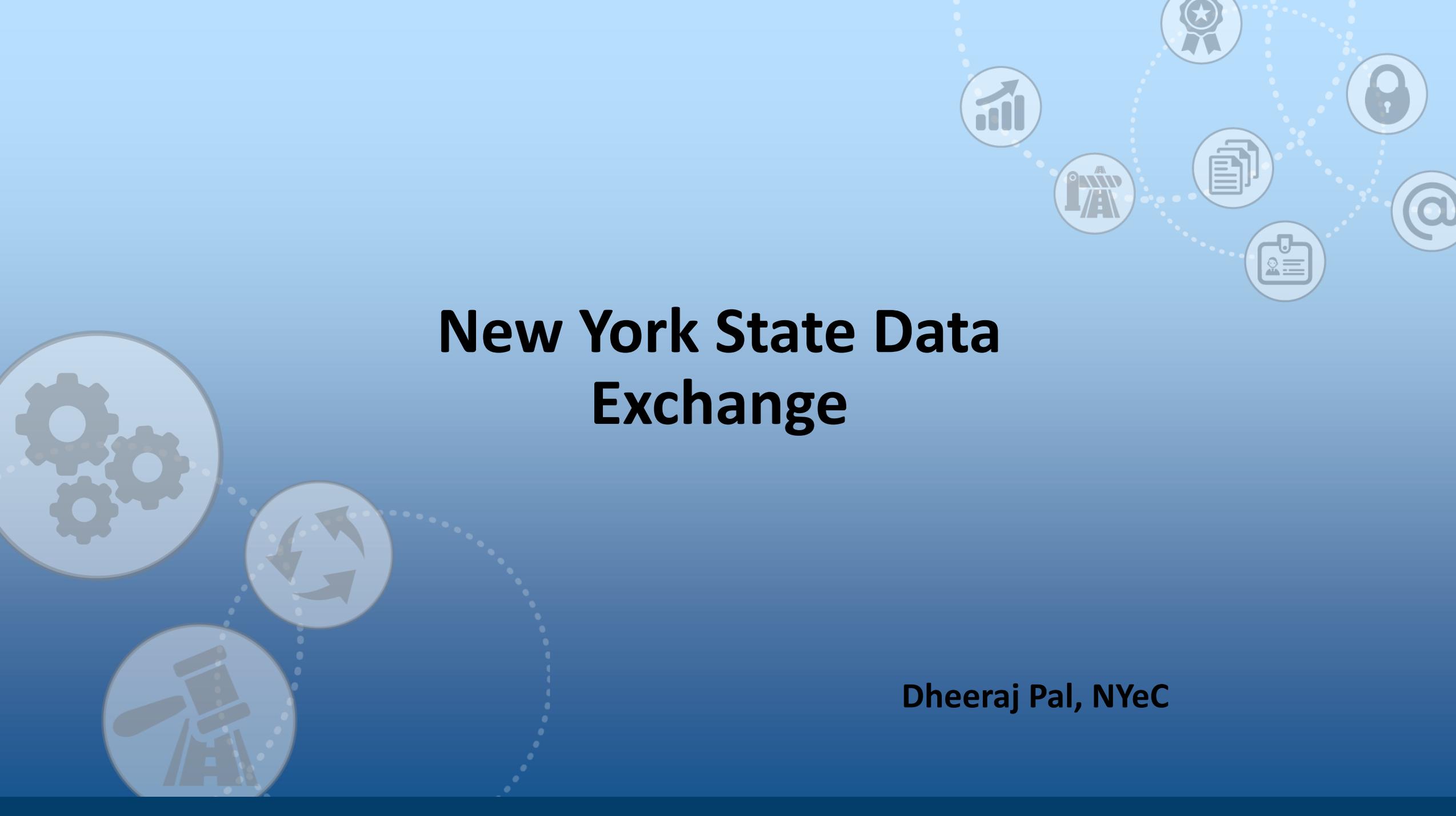
Additional questions? Contact: gravityproject@emiadvisors.net

 @thegravityproj

 <https://www.linkedin.com/company/gravity-project>

New York State Data Exchange

Dheeraj Pal, NYeC





NEW YORK eHEALTH
COLLABORATIVE



ONC FHIR at Scale Taskforce (*FAST*) Workshop - **Stakeholder Nuances**

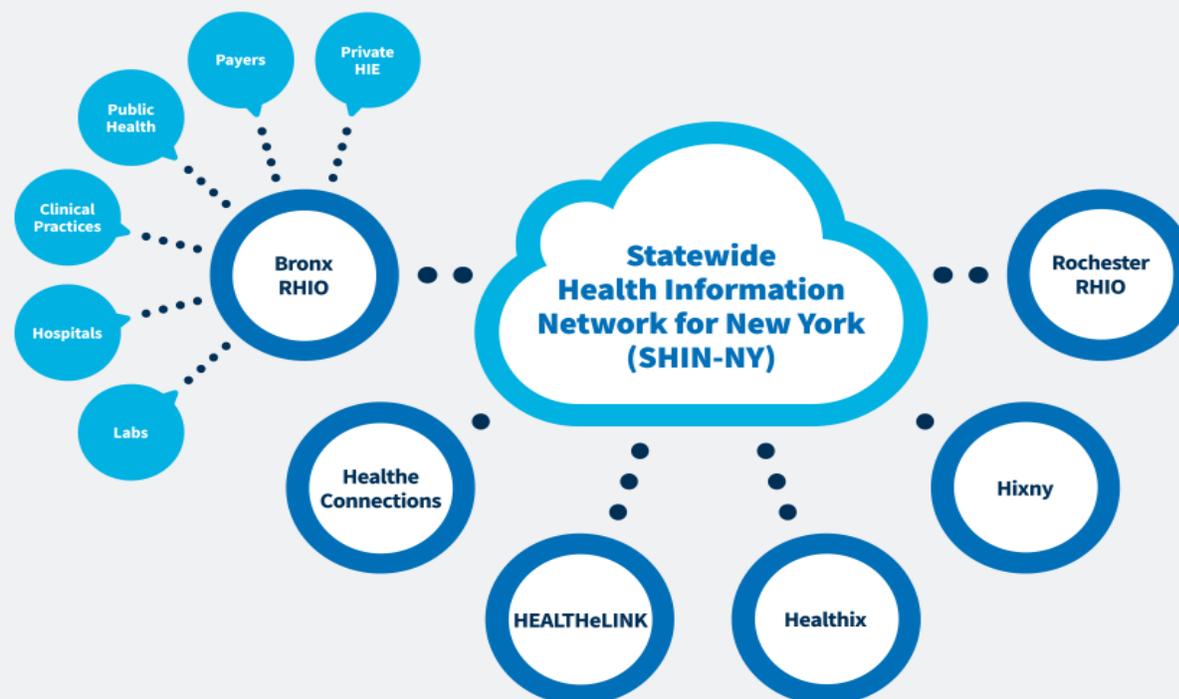
Dheeraj Pal
Sr. Technical Lead/Architect
Sept 14, 2020

dpal@nyehealth.org | [linkedin.com/in/dheerajpal](https://www.linkedin.com/in/dheerajpal)

New York State Data Exchange (HIE) Setup

New York State RHIO Environment

- Multiple Regional HIEs
- Various HIE Technologies
- Exchanging Documents in Clinical Viewers Since 2015
- Display of Multiple Documents



Infrastructure is critical for Interoperability

Multi-dimensional view of Interoperability :

- Information (What needs to be exchanged)
- Carrier (Who packages and carries it)
- Infrastructure (How it should be exchanged)

Information (Data) : Administrative , Payer, Clinical , etc.

Carrier : SOAP, REST, files over HTTP, HTTPS, TCP etc.

Infrastructure :

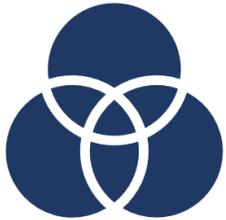
- Scalable and multi-flavored Security
- Registry to find the available services and invocation guidelines
- Data-point and package structure interpretation guidelines



Current vs Future Need

- The current Infrastructure is working well, supporting interoperability between different systems. Would benefit from more clearly defined guidelines and instructions that are scalable.
- For the best possible implementation of interoperability along with innovative standards (e.g. FHIR) requires a scalable, secure and reliable infrastructure to exchange the information in a meaningful (e.g. discrete) and timely fashion.

Challenges



Policy challenges to accept the common infrastructure.



Readiness of the community



Timeline to build this infrastructure



FAST: True accelerator to interoperability

There are lots of accelerator programs helping FHIR implementation expedite the secure and reliable the data exchange across the community.

FAST looks to be the “accelerator of accelerators”. Right implementation of this initiative can help the Healthcare industry to achieve true interoperability.



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Public Health Considerations for *FAST*



John W. Loonsk MD FACMI,
Johns Hopkins Bloomberg School of Public Health

Some Public Health Considerations for *FAST*

John W. Loonsk MD FACMI

Johns Hopkins Bloomberg School of Public Health

Consulting CMIO / eCR Lead APHL

Some Public Health Considerations – Generally

- Public Health is highly federated
 - There are 2400+ public health agencies nationwide as well as clinical infection control personnel
 - Most public health activities involve interorganizational exchange through public health disclosures
 - The Centers of the Centers for Disease Control and Prevention have traditionally maintained much of their own budgets and autonomy
 - Makes a cohesive “public health system” challenging and switching to a new standard a major project for a lot of organizations with limited support
- Many of the authorities for public health are at the state level (in routine times)
 - HIPAA enables public health when combined with a complementary law
 - Things change considerable in a public health emergency
 - Importance of “dual use”

Some Public Health Considerations - Specifically

1. Public Health is expected to use the minimum necessary data for the particular public health need in HIPAA, is stipulated to only use certain data by state laws, and wants to only use the data it needs – not usually aligned with clinical documents
2. Reporting / surveillance is implemented as “push” rather than selective authorization to clinical care data managed for external organizations
 - Healthcare compliance officers and lawyers seek control of disclosures
 - Routine reporting needs to be ingested into public health systems rather than ad hoc manual queries
3. There are a large variety of implementations to get to “scale”
 - Many involve multiple “hops”
 - Public health needs secure, reliable exchange / messaging which frequently also means queuing
 - Different availability of Health Information Exchanges and capabilities
 - Different health information networks with different policies and transactions
4. Transitions in standards require plans and patience
 - Requirements to change are on clinical care organizations
 - Transforms and other strategies need consideration

Open Discussion

(until 5 minutes remain)



Full Day Agenda & *FAST* Resources





Next Breakout Sessions Schedule

12pm – 1pm: Lunch Break

1:00pm – 2:30pm: Afternoon Breakouts Part 1 - FAST Pathways to Implementation (limited attendance, concurrent)

Room #1: *Standards*

Session Goals:

1. Discuss why the *FAST* community proposes that standards are key
2. Discuss and propose where the *FAST* standards should reside long term

Room #2: *Regulations*

Session Goals:

1. Consider the current regulatory landscape and how it presents opportunities or challenges related to each of the proposed solutions
2. Explore policy concepts and considerations that would allow for transparent and predictable update cycles in response to industry need.
3. Discuss ways to mitigate impact of understanding and implementing regulatory requirements for smaller organizations.

Room #3: *Process*

Session Goals:

1. Explore process related elements for implementation of FHIR-enabled interoperability at scale (e.g. process related governance, funding, and operational considerations, etc.)
2. Identify key things necessary to deploy solutions in a sustainable manner.
3. Explore limitations and opportunities to convene related groups that need to avoid any implication of anti-trust.



FAST Workshop – Full Day Agenda and Resources

- View the [FAST Workshop Summary and Detailed Agenda](#)
 - Morning and Closing Plenary
 - Breakout Room Sessions Schedule
 - Handouts and Resources
- Explore these *FAST* resources
 - New to *FAST*? Breakout sessions target interactive discussion and references the *FAST* work to date. Please consider exploring any of the following *FAST* artifacts before attending these breakout sessions:
 - [The FAST 2020 Mid-Year Report](#)
 - [The FAST 2019 End of Year Report](#)
 - [SME Panel Session Pages](#)

CONTINUE THE CONVERSATION!

Join the Technical Learning Community to stay up to date – receive updates about FAST presentations & events, provide additional input and follow our progress.

[JOIN THE LINKEDIN GROUP](#)

&

[SIGN UP FOR THE TLC](#)

All content is available on the [FAST Project Page](#) or <https://tinyurl.com/ONC-FAST>



Thank You

Connect with *FAST* on [LinkedIn](#) to stay informed

For more information on the *FAST* Initiative,
visit the *FAST* [Project Page](#) or <https://tinyurl.com/ONC-FAST>

Have any further questions/suggestions?

Please contact Stephen Konya at Stephen.Konya@hhs.gov
& Diana Ciricean at Diana.Ciricean@hhs.gov